CLAIMS

1. A viewer computing unit for receiving and displaying continuous video content programs, comprising:

a memory;

a processor programmed to determine whether the video content programs are interactive;

a tuner to tune to channels carrying the video content programs; and

an interactive support module stored in the memory, the interactive support module being dynamically loadable for execution on the processor when the tuner is tuned to a channel carrying a video content program that is interactive.

2. A viewer computing unit as recited in claim 1, wherein the interactive support module comprises a hyperlink browser.

3. A viewer computing unit as recited in claim 1, wherein the interactive support module comprises an Internet browser.

4. A viewer computing unit as recited in claim 1, and further comprising:

an electronic programming guide (EPG) stored in the memory and executable on the processor to organize programming information, the EPG associating a target specification to a target resource with a video content program; and

the interactive support module activating the target resource when the tuner is tuned to the video content program.

5. A viewer computing unit as recited in claim 4, wherein the target resource contains supplemental content which is displayed concurrently with the video content program to provide viewer interactivity with the video content program and display layout instructions prescribing how the supplemental content and the video content program are to appear in relation to one another when displayed, the processor being responsive to the layout instructions obtained from the target resource to display the supplemental content concurrently with the video content program.

6. A viewer computing unit as recited in claim 4, further comprising:

a receiver coupled to the processor to receive both the video content program and data supplied from the target resource.

7. A viewer computing unit as recited in claim 4, further comprising:

a first receiver coupled to the processor to receive the video content program; and

a second receiver coupled to the processor to receive data supplied from the target resource.

8. In an interactive entertainment device having an ability to receive and display television signals, the interactive entertainment device supporting a displayable user interface (UI), a method for operating the interactive entertainment device comprising the following step of displaying a hyperlink to a target resource in the UI to enable a viewer to activate the target resource directly from the UI by activating the hyperlink.

9. A method for enhancing a continuous video content program with supplemental hyperlink content to provide viewer interactivity with the video content program, comprising the following steps:

configuring digital data which defines a display layout prescribing how the supplemental hyperlink content and the video content program are to appear in relation to one another when displayed;

transmitting the digital data and the video content program to a viewer computing unit; and

displaying the supplemental hyperlink content and the video content program according to the display layout.

10. A method as recited in claim 9, further comprising the following steps:

configuring the data to define multiple different display layouts that are selectively displayed to the viewer depending upon the viewer's selections of possible choices presented in the supplemental hyperlink content; and

dynamically changing the display layouts of the supplemental hyperlink content and the video content program in response to said viewer's selections.

11. A method as recited in claim 9, wherein the transmitting step comprises the step of transmitting the digital data along with the video content program as the same signal.

12. A method as recited in claim 11, further comprising the following steps:

receiving said signal containing the digital data and the video content program at the viewer computing unit; and

separating the digital data from the video content program at the viewer computing unit.

13. A method as recited in claim 9, wherein the transmitting step comprises the step of transmitting the digital data along with the video content program as two separate signals.

14. A method as recited in claim 13, further comprising the following steps:

receiving a first signal containing the digital data using a first receiver at the viewer computing unit; and

receiving a second signal containing the video content program using a second receiver at the viewer computing unit.

15. A method as recited in claim 9, wherein the transmitting step comprises the following steps:

transmitting the digital data as a first signal from a first source; and

transmitting the video content program as a second signal from a second source that is different than the first source.

16. A method as recited in claim 9, wherein the configuring steps comprises the step of creating an HTML document having HTML extension attributes that assist in defining the display layout.

17. A method as recited in claim 16, further comprising the step of creating the HTML document using at least one extension attribute selected from a group comprising: a background extension attribute which specifies how a background is to appear; an image source extension attribute which specifies an address of a video source to be displayed; and a focus extension attribute to specify where a focus indicia is located in the display.

18. A method as recited in claim 9, wherein the configuring steps comprises the step of creating an HTML document having one or more HTML tags that assist in defining the display layout.

19. A method as recited in claim 18, further comprising the step of creating the HTML document using at least one tag selected from a group of tags comprising: a tag to control update or display of sound or pictures; a tag to store and coordinate collections of images; a tag to control font styles; a tag to retrieve and display one of the images; and a tag to describe transition from one screen display to another.

20. A method for presenting an interactive program, comprising the following steps:

receiving a program as a continuous stream of video data;

receiving digital data for supporting interactive functionality in relation to the program;

displaying the program within a program boundary on a visual display screen;

presenting supplemental content from the digital data in a presentation format on the visual display screen which enables the interactive functionality; and

dynamically controlling location and shape of the program boundary and the presentation format of the supplemental content relative to the program boundary on the visual display screen.

21. A method as recited in claim 20, further comprising the step of overlaying the supplemental content at least partly on the program displayed within the program boundary.

22. A method as recited in claim 20, further comprising the step of presenting the supplemental content outside of the program boundary.

23. A method as recited in claim 20, further comprising the step of synchronizing presentation of the supplemental content to corresponding points in the program.

24. A computer programmed to perform the steps recited in claim 20.

25. A computer-implemented method for activating interactive supplemental content for a video content program upon tuning to a channel carrying the program, comprising the following steps:

determining if the program is interactive compatible, where interactive compatible programs are associated with target resources containing data which support interactive functionality in conjunction with the associated programs, the target resources being located by corresponding target specifications; and

in an event that the program is interactive compatible, retrieving a target specification associated with the program and launching code to activate the target resource in support of interactive functionality for the associated program.

26. A computer-implemented method as recited in claim 25, wherein the target specifications are correlated with associated programs in a program listing, and further comprising the following steps:

checking the program listing to ascertain whether the program is interactive compatible; and

determining that the program is interactive compatible by presence of a target specification being associated with the program in the program listing.

27. A computer-implemented method as recited in claim 25, wherein said determining step comprises the step of checking a channel separate from said program channel for presence of the supplemental content in conjunction with the program being received on said program channel.

28. A computer-implemented method as recited in claim 25, further comprising the step of displaying an icon to visually inform the viewer that the program is interactive compatible.

29. A computer-implemented method as recited in claim 28, further comprising the step of displaying the interactive supplement content in response to the viewer activating the icon.

30. A computer-implemented method as recited in claim 25, further comprising the step of automatically displaying the interactive supplement content together with the interactive compatible program.

31. A computer-implemented method as recited in claim 25, further comprising the step of loading a hyperlink browser to activate the target resource.

32. A computer programmed to perform the steps recited in claim 25.

33. A method for creating a data structure in a storage medium that is used to organize programming information, comprising the following steps:

forming data fields in a storage medium to hold programming information pertaining to video content programs, some of the data fields holding text-based data; and

adding a target specification which references a target resource containing data that supports interactive functionality with respect to various ones of the video content programs by at least one of (1) forming a separate data field to hold the target specification for an associated video content program, or (2) embedding the target specification within the text-based data held in a data field.

34. A computer programmed to perform the steps recited in claim 33.

35. A storage medium having a data structure created according to the steps recited in claim 33.

36. A method for authoring an interactive entertainment program, comprising the following steps:

constructing digital data to support interactive functionality with a video content program, the digital data being configured to permit a viewer to interactively control display of supplemental content along with the video content program;

defining a display layout of how the supplemental content and the video content program are displayed; and

encoding the digital data with instructions to dynamically change the display layout of the supplemental content and the video content program.

37. A method as recited in claim 36, further comprising the step of encoding the digital data with instructions to dynamically change the display layout in response to viewer control.

38. A method as recited in claim 36, further comprising the following steps:

developing timing information to synchronize presentation of the supplemental content in conjunction with the video content program; and

encoding the digital data with instructions to alter the display layout of the supplemental content and the video content program in response to the timing information.

39. A method as recited in claim 36, further comprising the following step of storing the digital data with instructions as a target resource in a storage medium.

40. A target resource stored in a storage medium which is constructed according to the steps recited in claim 39.

41. A computer programmed to perform the steps recited in claim 36.

42. A computer-implemented method comprising the following steps:

tuning to a channel;

determining if a video content program being carried on the channel is interactive compatible as indicated by presence of a target specification provided in association with the video content program;

in an event that the program is interactive compatible, retrieving the target specification associated with the video content program on the channel;

launching a browser to activate a target resource located by the target specification, the target resource containing digital data which supports interactive functionality in conjunction with the associated video content program, the digital data defining supplemental content to enable viewer interactivity with the video content program and a display layout prescribing how the supplemental content and the video content program are to appear in relation to one another when displayed;

receiving the video content program over the channel;

receiving the digital data from the target resource; and

displaying the video content program and the supplemental content according to the display layout prescribed in the digital data received from the target resource.

43. A computer-implemented method as recited in claim 42, further comprising the following steps:

correlating the target specifications with associated programs in an electronic program guide (EPG); and

checking the EPG to ascertain whether the program is interactive compatible; and

determining that the program is interactive compatible by presence of a target specification in the EPG which is related to the program.

44. A computer-implemented method as recited in claim 42, further comprising the following steps:

displaying the video content program within a program boundary on a visual display screen;

presenting the supplemental content in a presentation format on the visual display screen; and

controlling location and shape of the program boundary and the presentation format of the supplemental content relative to the program boundary according to the display layout received from the target resource.

45. A computer-implemented method as recited in claim 44, further comprising the step of synchronizing presentation of the supplemental content to corresponding points in the video content program.

46. A computer-implemented method as recited in claim 42, further comprising the following steps:

receiving the video content program from a first source; and

receiving the digital data from the target resource at a second source different than the first source.

47. A computer-implemented method as recited in claim 42, wherein the digital data at the target resource further defines timing information to synchronize presentation of the supplemental content with the video content program, and comprising the step of displaying the supplemental content at prescribed times during the video content according to the timing information received from the target resource.

48. A computer-implemented method as recited in claim 42, further comprising the step of displaying an icon to visually inform the viewer that the program is interactive compatible.

49. A computer-implemented method as recited in claim 48, further comprising the step of displaying the supplement content in response to the viewer activating the icon.

50. A computer-implemented method as recited in claim 42, further comprising the step of automatically displaying the supplement content together with the video content program.

51. A computer-implemented method as recited in claim 42, further comprising the step of overlaying the supplemental content at least partly on the video content program.

52. A computer-implemented method as recited in claim 42, further comprising the step of presenting the supplemental content in an area surrounding the video content program.

53. A computer programmed to perform the steps recited in claim 42.

54. A computer-readable storage medium containing a target resource, the target resource comprising:

supplemental content for rendering to a viewer to supplement viewing of a continuous, non-interactive video stream;

one or more elements prescribing how the supplemental content is to be rendered along with, and relative to, the video stream.

55. A computer-readable storage medium as recited in claim 54 wherein the target resource comprises an HTML document and the elements comprise HTML tags and/or extension attributes for HTML tags.

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